The American

GAS LIGHT JOURNAL.

(ILLUSTRATED.)

DEVOTED TO THE INTERESTS OF

ILLUMINATION, HEATING, MECHANICAL, CHEMICAL

AND

GENERAL SCIENCE.

VOLUME LXXIII.

(FORTY-SECOND YEAR.)

FROM JULY 1 TO DECEMBER 31, 1900.

A. M. CALLENDER & CO., Publishers.

OFFICE OF PUBLICATION, NO. 32 PINE STREET, NEW YORK CITY.

INDEX TO VOLUME LXXIII.

July 1 to December 31, 1900.

A

Acetylene, Black ... 129
Acetylene, Combustion of, in Air Enriched with Oxygen, by G. L. Bourgerel ... 771
Acetylene for Train Lighting, by A. Lipschultz ... 444
*Acetylene Gas as Fuel in Chemical Laboratories, the Use of, by Arthur Lachman ... 209
Adams, A. D., Electric Transmission, Limits of ... 450
Address of G. G. Ramadell, President of the American Gas Light Association ... 682
Address of John Clements, President of the Pacific Coast Gas Association ... 162
Advertising Gas, by F. W. Frueauff ... 765
Aerial Navigation, Is the Problem of, Solved? ... 983
Ahrens, Felix B., Carbide of Calcium, "Accidental" Impurities in ... 371
Air, Compressed, Experiments on the Reheating of ... 642
Air of a Room, Some Curious Tests of the ... 365
*Air Pyrometer, a New Recording, by W. H. Bristol ... 966
Allingham, G. C., Interior Wiring ... 809
Alternating Current Generators, by H. G. Heist ... 170
Aluminum Industry, Recent Progress in the, by Professor J. W. Richards ... 90
American Coal, Exports of ... 93
American Coal for Foreign Consumption ... 419
American Competition, Sir Lowthian Bell on ... 1048
American Gas Educational Fund, The History, Character and Results of the Educational Work Carried on by the Trustees of the, by A. E. Forstall ... 483
American Gas Light Association, Twenty-eighth Annual Meeting ... 722, 782, 902
Ammonia and Coal Tar, Prof. Lunge on ... 902, 1010
*Analysis, Gas, Burette for Accurate, by A. H. White ... 7
*Anderson, William C., Records and Accounts, The Use of Cards for ... 708
Arc Lamps, The Bremer ... 531
*Arc, Photometry of the, by Prof. C. P. Matthews ... 371
Artificial Light of the Same Character as Daylight, Production of an, by Arthur Dufton, M. A., and Walter M. Gardner ... 567
Atmosphere, Chemical Composition of the ... 802
Atmosphere, Combustible Gases in the ... 819
Atmospheric Electricity, New Theory Respecting ... 122
*Automatic Lubricator, The Merrill ... 89

B

Babbitt, A. B., Blue-Printing ... 10
Bar Photometer, Efficiency of, with Mixed Coal and Water Gas ... 933
Barret, A. H., Inclined Retorts ... 726
Bell, Sir Lowthian, on American Competition ... 1048
Benches, Use of Crude Petroleum for Firing, by Dr. R. M. Powers ... 207
*Birchmore, Dr. W. H., De Lery Light, Prof. V. B. Lewes and the ... 1049
Birchmore, Dr. W. H., Illuminating Problem Again ... 602
*Blast Furnace Gas Engine, The Oechelhaeuser ... 963
*Blower for Portable Forges ... 889
Blue-Printing, by A. B. Babbitt ... 10
Boiler Explosions, Thoughts Suggested by, by T. R. Parker ... 249
Boilers and Engines, Weakest Links in ... 567
Bourgerel, G. L., Acetylene, Combustion of, in Air Enriched with Oxygen ... 771
Bremer Arc Lamps ... 531
*Bristol, W. H., Air Pyrometer, a New Recording ... 966
Britton, John A., Gas Stoves, the Best Method of Introducing ... 985
Bueb, Dr., Cyanide in Gas Works, Production and Manufacture of ... 564
*Burette for Accurate Gas Analysis, by A. H. White ... 7
*Burrell, B. A., Laboratory Gas Furnace, Improved Door for ... 127

C

Cahoon, J. B., Corporations, State Control of ... 1047
Canada Petroleum Industry, by J. D. Noble ... 465
Canfield, M. G., Municipal Control, Trials and Troubles of Instituting and Enforcing ... 650
Carbide of Calcium, "Accidental" Impurities in, by Felix B. Ahrens ... 371
*Carulla, F. J. B., Valuation of Gas Liquor ... 1003
Central Station Costs, Some Data as to, by Prof. W. D. Marks ... 849
Cheaper Lighting Rates for Fitchburg, Decision of the Massachusetts Board of Gas and Electric Light Commissioners in the Matter of the Petition for ... 645
Chemical Composition of the Atmosphere ... 802
*Chemical Laboratories, the Use of Acetylene Gas as Fuel in, by Arthur Lachman ... 209
*Chimney, Highest in the World ... 1009
Clements, John, President Pacific Coast Gas Association, Address of ... 162
Clough, J. L., Records for a Lighting Company, An Elaborate System of ... 771
Coal, American Exports of ... 93
Coal, American, for Foreign Consumption ... 419
Coal and Water Gas, Mixed, Efficiency of the Bar Photometer with ... 933
Coal, Australasian ... 391
*Coal Calorimeter, A New, by W. S. Farr ... 365
Coal Exports ... 600
Coal Fields of Natal, by Wm. Taylor Heslop ... 1036
*Coal Fields of the Philippines, by G. D. Rice ... 645
Coal Gas, Heating and Lighting Power of, by T. Fairley, F. I. C. ... 683
Coal Handling for Gas Works ... 934
Coal in England, Cost of, by Norton H. Humphrys ... 3
*Coal Pockets, The Design of, by L. G. Montony ... 404
Coal Resources of the United States, The ... 691
Coal Tar and Ammonia, Prof. Lunge on ... 902, 1010
Coal Trade, The British ... 850
*Cockey, F. G., Construction of a Concrete Gasholder Tank, Difficulties in the ... 886
College Bred Men and their Relation to Practical Work, by Dr. Edward Kirk ... 162
Combustible Gases in the Atmosphere ... 819
Combustion of Acetylene in Air Enriched with Oxygen, by G. L. Bourgerel ... 771
Commercial Gases, Synthesis of, by L. P. Lowe ... 322
Competition, American, Sir Lowthian Bell on ... 1048
Compressed Air, Experiments on the Reheating of ... 642
Compressor, 150-Horse Power 8-Stage ... 778
Concrete and its Uses, A Symposium on ... 689
Concrete Work, Rules for Heavy ... 571
Condensing Engines, Exhaust Pipes for ... 846
Congress, International Gas, Paris, List of Papers to be Read at the ... 362
*Connections in Gas Works, Pipes and Piping, by "Engineer" ... 599
Connellsville Coke Region, Future of the ... 599
Consolidations as a Source of Increased Competition ... 590
Consumer, The Unprofitable, by Norton H. Humphrys ... 643
Cooking, Electric Heating and ... 89
Cooper, A. S., Petroleum, California, Some Chemical and Physical Characteristics of ... 282
Corporations, State Control of, by J. B. Cahoon ... 1047
CORRESPONDENCE—
Special English Correspondence, by Norton H. Humphrys ... 10, 172, 332, 531, 692, 902, 1052
*Crane Company Novelties, Two ... 902
Cranes, Electric Traveling, by A. D. Williams ... 610
Creosote, Preservative Virtue of ... 732
*Crockett, J. B., Gas Engines, Some Notes on Larger Types of ... 309
Crude Gas Liquor as a Manure ... 452
Crude Petroleum for Firing Benches, Use of, by Dr. R. M. Powers ... 207
Curious Tests of the Air of a Room, Some ... 365
Cyanides in Gas Works, Production and Manufacture of, by Dr. Bueb ... 564

D

Decision of the Massachusetts Board of Gas and Electric Light Commissioners in the Matter of the Petition for Cheaper Lighting Rates for Fitchburg ... 645
*De Lery Light, Prof. V. B. Lewes and the, by Dr. W. H. Birchmore ... 1049
Dibdin, W. J., Gas, Effect of Quality on the Consumption of ... 1004
Dielectrics at High Voltages, Notes on the Testing of Modern, by J. Wright ... 890
Diesel Oil Engine, New Experiments on the ... 492
Diffusion of Gases and Liquids, Some Recent Work on the ... 651
Distribution Losses, Means for Diminishing, by P. H. Gibbons ... 490
Doty, Paul, Grand Rapids (Mich.) Gas Light Company, Origin and Growth of the ... 484
Dufton, Arthur, M. A., and Walter M. Gardner, Artificial Light of the Same Character as Daylight, Production of an ... 567

E

*Earnshaw, E. H., Pyrometer, a Blue Glass ... 803
EDITORIALS—
American Gas Light Association, Proceedings of the Denver Meeting of the ... 721
American Gas Light Association, Special Editorial Correspondence ... 641
American Gas Light Association, the Denver Meeting of the ... 802
American Gas Light Association, the Next Meeting of the ... 802
Association Proceedings Budget, Our Current ... 761
Baltimore Consolidated Gas, Contest in ... 121
Cathels, Donald Louis, Obituary Note ... 882
Chicago Special for Denver, the ... 682
Coal Supply of England, the ... 281
Cunningham, Christopher, Obituary Note ... 962
Denver Meeting, Outing Time of the ... 681
Denver Meeting, the ... 562
Dieterich Syndicate, Another Flaw that Promises Further Cracking in the ... 961
Disaster, the Galveston ... 44
Educational Fund Practice and Scheme, a Correspondent's Views on the ... 76
Fay, William J., Death of ... 24
"Field's Analysis" for 1899 ... 16
Galveston Situation, the ... 48
Gas Coals, England and Her ... 40
Gas Company Sustained, the Louisville (Ky.) ... 12
Gas Congress, International ... 48
"Gas Lighting," by Charles Hunt ... 84
Gas Processes, the Investigation of ... 24
Gas Question, Paris Municipality and the ... 32
Gas Supply of Dallas, Tex., Settlement Respecting the Guild Diversion, a ... 104
Iron Prices, a Slacking in ... 40
Kansas Gas, Water and Electric Light Association, Third Annual Meeting of the ... 100
Kentucky Heating Company, Sore Straits of the ... 92
Labor, the Unrest of ... 4
Lecture, Dr. Love's ... 12
McKeever, James J., Obituary Note ... 16
Nettleton, C. H., Assumes Control of the New Haven Gas Light Company ... 100
Pacific Coast Gas Association, Eighth Annual Meeting ... 1
Pacific Coast Gas Association—Special Editorial Correspondence ... 8
Payne, Milton J., Obituary Note ... 16
Personal ... 882
Photometry vs. Calorimetry ... 941
Ramadell, George G., Named for Honorary Membership in the French Association of Gas Managers ... 1001
Ranshaw, Henry, Death of ... 121
Records and Accounts, the Use of Cards for ... 801
Starr, James M., Death of ... 4
Swindler, a ... 761
Thanksgiving Time ... 881
Thompson, George Treadway, Death of ... 562
Thompson, George Treadway, Obituary ... 601
"Thompson Library," the ... 683
Western Gas Association, Additional Representation for the, at the International Gas Congress ... 241
Western Gas Association, Proceedings, Second Volume ... 962
Western Gas Association, Representation at the International Gas Congress on Behalf of the ... 1
Whitney and the Artificial Lighting Business, the Name of ... 361
Wilkiemeyer, Herman, Obituary Note ... 882
Edgerton Standard, the, by Alten S. Miller ... 769
Educational Work Carried on by the Trustees of the American Gas Educational Fund, the History, Character and Results of the, by A. E. Forstall ... 483
Edwards, A. E. A., Engineers' Shops, Artificial Light with Special Reference to ... 50
Egner, Frederic, Fireclay Material for Gas Works, a Chapter on the Manufacture of ... 290
*Eichelbrenner, G., Gas Producers, Separate, for the Heating of Retort Benches ... 604
Elbers' Method for Using Mineral Wool ... 211
Electrical Fires and Spontaneous Ignition in Warehouses ... 852
Electrical Measuring Instruments, by J. Franklin Stevens ... 91, 128
Electrical Outlook in Siam, by Hamilton King ... 1013
Electrical Plants in the Philippines, Opportunities for Establishment of, by G. D. Rice ... 88
Electrical Purposes, Substitutes for India Rubber and Gutta Percha for, by "H. C. S." ... 47
Electric Furnaces ... 652
Electric Furnaces, Decision Relating to ... 13
*Electric Furnaces for Laboratory Use, by Charles L. Norton ... 1051
Electric Heating and Cooking ... 89
Electricity, Atmospheric, New Theory Respecting ... 122
Electricity, British Regulations Concerning the Distribution of ... 212
Electricity, New Legislation Affecting the Use and Misuse of ... 843
Electricity, Regulation in Long Distance Power Transmission by, by F. A. C. Perrine ... 446
*Electricity, Unutilized Comforts of, by R. S. Hale ... 530
*Electric Lamps, Street Lighting by, with Special Reference to the System in Use at Croydon, England, by F. H. Minshall ... 968
*Electric Lighting Plant for Residence Service ... 967
Electric Light Plant, Evolution of One, by W. H. Wakeman ... 891
*Electric Plant, Gas Power, at Clausthal, Prussia ... 906
Electric Transmission, Limits of, by A. D. Adams ... 450
Electric Traveling Cranes, by A. D. Williams ... 610
*Electrolysis of Underground Metallic Structures, by Dabney H. Maury ... 165
Engineers' Shops, Artificial Light with Special Reference to, by A. E. A. Edwards ... 50
Engineer, Trusts and their Relation to the, by Charles H. Wright ... 408
*Engine, Gas, 150-Horse Power, Using "Mond" Gas ... 48
Engines and Boilers, Weakest Links in ... 567
*Engines, Gas, by "Machinist" ... 729
Engines, Some Notes on Inquiries for, by J. A. Seager ... 366

HE PAGES WHICH ARE MISSING WERE REMOVED
BECAUSE THEY WERE ADVERTISEMENTS

PAGES WHICH ARE MISSING WERE REMOVED
BECAUSE THEY WERE ADVERTISEMENTS

644.313
Am3
v.73
1900
Engr. Lib.

Lacks 1 page. (?)

INDEX TO VOL. LXXIII.

*Engines, Gas, Some Notes on Larger Types of, by J. B. Crockett 902
Ethics of Insulating Materials, by J. Wright 649
Exhaust Pipes for Condensing Engines 846
Experiences, by O. M. Gregory 328
Experiments, New, on the Diesel Oil Engine 492
Explosions, Boiler, Thoughts Suggested by, by T. R. Parker 242
Exports, Coal 609

F

Fairley, T., F. I. C., Coal Gas, Heating and Lighting Power of 686
Fireclay Material for Gas Works, A Chapter on the Manufacture of, by Frederic Egner 290
Fire Protection for Life and property, by Jean Wetmore 250
Fire Resister, Wired Glass as a 288
Fires, Electrical, and Spontaneous Ignition in Warehouses, ... 850
Firing Beaches, Use of Crude Petroleum for, by Dr. R. M. Powers 207
Foreign Consumption, American Coal for 412
*Forges, Portable, Blower for 689
Forstall, A. E., Educational Work Carried on by the Trustees of the American Gas Educational Fund, The History, Character and Results of the 483
Forstall, A. E., Gas, Governmental Control of the Price of. 686
Foundry, Training Students in, by T. D. West 52
*French, William, Hydrogen and Oxygen, Influence of Finely Divided Platinum on the Combination of 49
Fruenauff, F. W., Gas Advertising 765
*Fuel in Chemical Laboratories, The Use of Acetylene Gas as, by Arthur Lachman 209
Fuel in Great Britain, Dearer 212
*Furnace, A Tool Room Gas Heating 609
Furnaces, Electric 652
Furnaces, Electric, Decision Relating to 18
*Furnaces, Electric, for Laboratory Use, by Charles L. Norton 1051

C

Gardner, Walter M., and Arthur Dufton, M. A., Artificial Light of the Same Character as Daylight, Production of an 567
*Gas, Acetylene, as Fuel in Chemical Laboratories, The Use of, by Arthur Lachman 209
Gas Advertising, by F. W. Fruenauff 765
*Gas Analysis, Burette for Accurate, by A. H. White 7
Gas Congress in Paris, International.—Proceedings in the Palace of the Congress and Elsewhere, Under the Direction of the President, M. Theodore Vautier 543
Gas Congress, International, Paris, List of Papers to be Read at the 382
Gas, Effect of Quality on the Consumption of, by W. J. Dibdin 1004
Gas Engine Electric Lighting Plant in a Public Library Building 929
*Gas Engine Oiler, the Sargent 845
*Gas Engine, 150-Horse Power, Using "Mond" Gas 48
Gas Engine Questions 961
*Gas Engines, by "Machinist" 739
*Gas Engines, Some Notes on Larger Types of, by J. B. Crockett 902
Gases and Liquids, Some Recent Work on the Diffusion of. 651
Gases, Combination of by the Agency of Spongy Platinum. 214
Gases, Combustible, in the Atmosphere 812
Gases, Commercial, Synthesis of, by L. F. Lowe 323
Gas, Governmental Control of the Price of, by A. E. Forstall 683
*Gas Heating Furnace, a Tool Room 609
*Gasholder Tank, Concrete, Difficulties in the Construction of, by F. G. Cockey 886
Gas, Illuminating, from Sewage Sludge 851
Gas Light, Incandescent, Theory of the, by Dr. E. G. Love 728
Gas Liquor, Crude, as a Manure 452
*Gas Liquor, Valuation of, by F. J. R. Carulla 1002
*Gas Mantle, Incandescent, and Its Uses, by Prof. Vivian B. Lewes 806, 842, 882
Gas, Modern Methods of Manufacturing, with a Description of its Distribution under High Pressure, by F. H. Shelton 122
Gas, Natural, as an Important Trade Factor in the Pittsburg District, by J. C. McDowell 306
Gas, Natural, in 1899, Production of 929
Gas, Natural—Its Production and Consumption, by "W. L. C." 563
Gas, Natural, May be Legally Exported from Indiana 922
*Gas Power Electric Plant at Clausthal, Prussia 966
Gas Processes, Investigation of, by A. C. Humphreys 246
*Gas Producers, Separate, for the Heating of Retort Benches, by G. Eichelbrenner 604
Gas Profession, Future of the 1045
Gas Securities, Market for..14, 55, 95, 135, 175, 215, 254, 294, 334, 374, 414, 454, 494, 534, 574, 613, 655, 695, 735, 775, 814, 855, 894, 935, 974, 1015, 1055
Gas Stoves, the Best Method of Introducing, by John A. Britton 375
*Gas, the New, by W. H. Y. Weber 49
Gas Works, Coal Handling for 924
Gas Works, Fireclay Material for, a Chapter on the Manufacture of, by Frederic Egner 290
Gas Works in Ireland, Impressions of Small, by Percy Griffith 402
*Gas Works, Pipes and Piping Connections in, by "Engineer" 3
Generators, Alternating Current, by H. G. Heist 170
Gibbons, P. H., Distribution Losses, Means for Diminishing 490
*Glass Tube Oven and a Steam Pipe Condenser for the Laboratory Outfit 331
Glass, Wired, as a Fire Resister 282
Grand Rapids (Mich.) Gas Light Company, Origin and Growth of the, by Paul Doty 484
*Greene, Dr. Wm. H., Prismatic Lighting for the Illumination of Dark Interiors 250
Gregory, O. M., Experiences 328
Griffith, Percy, Gas Works in Ireland, Impressions of Small 402
Gütta Percha and India Rubber, Substitutes for, for Electrical Purposes, by "H. C. S." 47

H

Hale, Henry, Soft Coal Mining and Handling in the United States, Modern 1049
*Hale, R. S., Electricity, Unutilized Comforts of 530
Harcourt 10-Candle Power Pentane Lamp, by R. Norris 724
Harris, G. M., Lighting of Small Towns 131
Heating and Cooking, Electric 89
Heating and Lighting Power of Coal Gas, by T. Fairley, F. I. C 686
*Heating Furnace, a Tool Room Gas 609
Heslop, Wm. Taylor, Coal Fields of Natal 1003
*Heating of Retort Benches, Separate Gas Producers for the Heating of, by G Eichelbrenner 604
Heavy Concrete Work, Rules for 571
Heist, H. G., Alternating Current Generators 170
Helps, George, Slot Consumption Where Meters and Fittings are Supplied—An Opinion on Paying Averages, and One Way of Obtaining Them 443
*Highest Chimney in the World 1009
High Pressure, Modern Methods of Manufacturing Gas, with a Description of its Distribution under, by F. H. Shelton 122
*High Pressures, Reduction of the Cost of Distribution by the Use of, by F. H. Shelton 586
Home Rule, Municipal: Its Scope and Limitations, by R. E. McMath 448
Humphreys, A. C., Gas Processes, Investigation of 246
Humphrys, Norton H., Coal in England, Cost of 3
Humphrys, Norton H., Correspondence, Special English ... 10, 172, 332, 531, 692, 892, 1052
Humphrys, Norton H., Unprofitable Consumer, The 643
*Hydrogen and Oxygen, Influence of Finely Divided Platinum on the Combination of, by Wm. French 49

I

Illuminating Gas from Sewage Sludge 851
*Illumination of Dark Interiors, Prismatic Lighting for the, by Dr. Wm. H. Greene 250
Illumination Problem Again, by Dr. W. H. Birchmore 602
Impurities, "Accidental," in Carbide of Calcium, by Felix B. Ahrens 371
Incandescent Gas Light, Theory of the, by Dr. E. G. Love 728
Incandescent Gas Mantle and its Uses, by Prof. Vivian B. Lewes 806, 842, 882
*Incandescent Lamp Holder, A New 847
Incandescent Lamps, High Voltage, by Prof. G. D. Shepardson 403
Inclined Retorts, by A. H. Barret 726
Increased Competition, Consolidations as a Source of 530
India Rubber and Gutta Percha, Substitutes for, for Electrical Purposes, by "H. C. S." 47
Insulating Materials, Ethics of, by J. Wright 649
International Gas Congress in Paris—Proceedings in the Palace of the Congress and Elsewhere, under the Direction of the President, M. Theodore Vautier 523
International Gas Congress, Paris, List of Papers to be Read at the 382
Iron and Steel, Our European Competitors in 931
Items of Interest from Various Localities 12, 53, 93, 133, 173, 213, 252, 293, 333, 373, 412, 452, 492, 532, 572, 612, 653, 693, 733, 773, 812, 853, 893, 933, 972, 1013, 1053
Interior Wiring, by G. C. Allingham 809

J

Jones, F. R., Power and Light for the Machine Shop and Foundry 1005

K

King, Hamilton, Electrical Outlook in Siam 1013
Kirk, Dr. Edward, College-Bred Men and their Relation to Practical Work 132

L

*Laboratory Gas Furnace, Improved Door for, by B. A. Burrell 127
*Lachman, Arthur, Acetylene Gas as Fuel in Chemical Laboratories, The Use of 209
*Lamp Holder, A New Incandescent 847
Lamps, High Voltage Incandescent, by Prof. G. D. Shepardson 403
Lamps, The Bremer Arc 531
Leonard, F. H., Jr., Power Factor, Influences Exerted by 971, 1011
*Lewes, Prof. V. B., and the De Lary Light, by Dr. W. H. Birchmore 1043
Lewes, Prof. V. B., Incandescent Gas Mantle and its Uses 806, 842, 882
*Lewis, G. P., Purifier Construction, Notes on 922
Light and Power Distribution, Systems and Apparatus for, by C. P. Steinmetz 580, 607
Light and Power for the Machine Shop and Foundry, by F. R. Jones 1005
Light, Artificial, with Special Reference to Engineers' Shops, by A. E. A. Edwards 50
Lighting and Heating Power of Coal Gas, by T. Fairley, F. I. C 686
Lighting Company, An Elaborate System of Records for a, by J. L. Clough 773
Lighting Generator Sets, Modern, Some of the Requisites of, by H. G. Heist 1050
Lighting of Small Towns, by G. M. Harris 131
*Lighting Plant, Electric, for Residence Service 967
Lighting Plant, Gas Engine Electric, in a Public Library Building 929
Lipschultz, A., Acetylene for Train Lighting 444
Liquids and Gases, Some Recent Work on the Diffusion of.. 651
Long Distance Power Transmission by Electricity, Regulation in, by F. A. C. Perrine 446
Love, Dr. E. G., Incandescent Gas Light, Theory of the... 728
Lowe, L. P., Gases, Commercial, Synthesis of 323
*Lubricator, Automatic, The Merrill 89
Lucus a Non Lucendo 846

M

Manager, Learning to be a 811
Manure, Crude Gas Liquor as a 452
Market for Gas Securities 14, 55, 95, 135, 175, 215, 254, 294, 334, 374, 414, 454, 494, 534, 574, 613, 655, 695, 735, 775, 814, 855, 894, 935, 974, 1015, 1055
Marks, Prof. W. D., Central Station Costs, Some Data as to 849
Mathematics, Practical 450
*Matthews, Prof. C. P., Photometry of the Arc 371
*Maury, Dabney H., Electrolysis of Underground Metallic Structures 165
McDowell, J. C., Gas, Natural, as an Important Trade Factor in the Pittsburg District 306
McMath, R. E., Municipal Home Rule, Its Scope and Limitations 448
Measuring Instruments, Electrical, by J. Franklin Stevens. 92, 128
*Merrill Automatic Lubricator 89
*Metallic Structures, Underground, Electrolysis of, by Dabney H. Maury 165
*Meyer, H. C., Jr., Steam Power Plants, Design of 5, 125, 365, 444, 487, 647, 925
Miller, Alten S., Edgerton Standard, the 703
Mineral Wool, Fibers' Method for Using 211
*Minshall, F. H., Street Lighting by Electric Lamps, with Special Reference to the Systems in Use at Croydon, England 966
Modern Lighting Generator Sets, Some of the Requisites of, by H. G. Heist 1050
"Mond" Gas, 150-Horse Power Gas Engine Using 48
*Montony, L. G., Coal Pockets, the Design of 404
*Morris, W. C., Water Gas, Removal of Tar from 765
Municipal Control, Trials and Troubles of Instituting and Enforcing, by M. G. Canfield 650
Municipal Home Rule: Its Scope and Limitations, by R. E. McMath 448
Municipal Plants, Some Experiences with, by Prof. G. D. Shepardson 130

N

Naphthaline from Retort to Point of Deposition, by Wm. Young 89
Natural Gas in 1899, Production of 929
Natural Gas—Its Production and Consumption, by "W. L. C." 563
Natural Gas May be Legally Exported from Indiana 922
Navigation, Aerial, Is the Problem of, Solved? 933
Noble, J. D., Petroleum Industry of Canada 485
Norris, R., Harcourt 10-Candle Power Pentane Lamp 724
*Norton, Chas. L., Electric Furnaces for Laboratory Use ... 1051
NOTICES, OFFICIAL—
American Gas Light Association..221, 441, 481, 561, 581, 1041
New England Association of Gas Engineers..201, 241, 281, 321
Ohio Gas Light Association 961, 1001
Pacific Coast Gas Association 1, 41

O

*Oechelhaeuser Blast Furnace Gas Engine 963
Oil Engine, New Experiments on the Diesel 492
"Outdoor Work" in Manchester, England 731
*Outlet Pipe from a Gasholder, Repair of a Broken 36-Inch, by William Nichols Tolman 764
Origin and Growth of the Grand Rapids (Mich.) Gas Light Company, by Paul Doty 484
*Oxygen and Hydrogen, Influence of Finely Divided Platinum on the Combination of, by Wm. French 49

P

Pacific Coast Gas Association, Eighth Annual Meeting 162, 202, 242, 282, 322, 363
Parker, T. R., Boiler Explosions, Thoughts Suggested by. 242
*Parr, W. S., Coal Calorimeter, a New 565
Perrine, F. A. C., Electricity, Regulation in Long Distance Power Transmission, by 446

475486

INDEX TO VOL. LXXIII.

Petition for Cheaper Lighting Rates for Fitchburg, Decision of the Massachusetts Board of Gas and Electric Light Commissioners in the Matter of the..... 645
Petroleum, California, Some Chemical and Physical Characteristics of, by A. S. Cooper..... 289
Petroleum, Crude, Use of, for Firing Benches, by Dr. R. M. Powers..... 307
Petroleum Industry of Canada, by J. D. Noble..... 485
Phenomena of Vision, Experiments Illustrating..... 811
*Photometry of the Arc, by Prof. C. P. Matthews..... 371
Photometry, Violle on Contemporary..... 805
*Pipe Line, a 12-Inch Submerged..... 689
*Pipes and Piping Connections in Gas Works, by "Engineer"..... 2
Pipes, Steam, How to Use Water in..... 411
Plants, Electrical, in the Philippines, Opportunities for Establishment of, by G. D. Rice..... 88
*Platinum, Finely Divided, Influence of, on the Combination of Hydrogen and Oxygen, by Wm. French..... 49
Platinum, Spongy, Combination of Gases by the Agency of. 214
*Portable Forges, Blower for..... 889
Power and Light Distribution, Systems and Apparatus for, by C. P. Steinmetz..... 569, 607
Power and Light for the Machine Shop and Foundry, by F. R. Jones..... 1005
Power Factor, Influences Exerted by, by F. H. Leonard, Jr. 971, 1011
*Power Plants, Steam, Design of, by H. C. Meyer, Jr..... 5, 125, 366, 444, 487, 647, 925
Powers, Dr. R. M., Benches, Use of Crude Petroleum for Firing..... 307
Practical Mathematics..... 450
Practical Work, College Bred Men and their Relation to, by Dr. Edward Kirk..... 132
*Pressures, High, Reduction of the Cost of Distribution by the Use of, by F. H. Shelton..... 536
Price of Gas, Governmental Control of the, by A. E. Forstall 686
*Prismatic Lighting for the Illumination of Dark Interiors, by Dr. Wm. H. Greene..... 260
Processes, Gas, Investigation of, by A. C. Humphreys..... 346
Protection, Labor's Interest in, by "D. W. D."..... 680
Pump, 30,000,000-Gallon, Test of, at Chestnut Hill, Boston. 992
*Purifier Construction, Notes on, by G. P. Lewis..... 929
*Pyrometer, a Blue Glass, by E. H. Earnshaw..... 803

R

Radium, Atomic Weight of..... 892
Ramsdell, G. G., President of the American Gas Light Association, Address of..... 689
*Records and Accounts, the Use of Cards for, by William C. Anderson..... 705
Records for a Lighting Company, an Elaborate System of, by J. H. Clough..... 771
Reheating of Compressed Air, Experiments on the..... 649
Reist, H. G., Lighting Generator Sets, Modern, Some of the Requisites of..... 1060
*Retort Benches, Separate Gas Producers for the Heating of, by G. Eichelbrenner..... 604
*Retorting and Condensing Temperatures, by Forbes Waddell..... 405
Retorts, Inclined, by A. H. Barret..... 736
*Rice, G. D., Coal Fields of the Philippines..... 645
Rice, G. D., Electrical Plants in the Philippines, Opportunities for Establishment of..... 88
Richards, Prof. J. W., Aluminum Industry, Recent Progress in the..... 90

S

*Sargent Gas Engine Oiler..... 843
Seager, J. A., Engines, Some Notes on Inquiries for..... 386
Securities, Gas, Market for..... 14, 55, 95, 135, 175, 215, 254, 294, 334, 374, 414, 454, 494, 534, 574, 613, 655, 695, 735, 775, 814, 855, 894, 935, 974, 1015, 1055
Sewage Sludge, Illuminating Gas from..... 851
Shelton, F. H., Gas, Modern Methods of Manufacturing, with a Description of its Distribution Under High Pressure..... 129
*Shelton, F. H., High Pressures, Reduction of the Cost of Distribution by the Use of..... 536
Shepardson, Prof. G. D., Incandescent Lamps, High Voltage..... 408
Shepardson, Prof. G. D., Municipal Plants, Some Experiences with..... 180
Slot Consumption where Meters and Fittings are Supplied —An Opinion on Paying Averages, and One Way of Obtaining them, by George Helps..... 449
Soft Coal Mining and Handling in the United States, Modern, by Henry Hale..... 1019
Spongy Platinum, Combination of Gases by the Agency of.. 214
Spontaneous Ignition in Warehouses, Electrical Fires and.. 889
*Steam Pipe Condenser and a Glass Tube Oven for the Laboratory Outfit..... 331
Steam Pipes, How to Use Water in..... 411
*Steam Power Plants, Design of, by H. C. Meyer, Jr...5, 125, 366, 444, 487, 647, 925
Steel and Iron, Our European Competitors in..... 991
Steinmetz, C. P., Light and Power Distribution, Systems and Apparatus for..... 569, 607
Stevens, J. Franklin, Electrical Measuring Instruments....91, 199
Stoves, Gas, the Best Method of Introducing, by John A. Britton..... 285
*Street Lighting by Electric Lamps, with Special Reference to the Systems in Use at Croydon, England, by F. H. Minshall..... 968
*Submerged Pipe Line, a 12-Inch..... 689
Substitutes for India Rubber and Gutta Percha for Electrical Purposes, by "H. C. S."..... 47
Sulphur in England, Production of..... 5

T

*Temperatures, Retorting and Condensing, by Forbes Waddell..... 405
Tests of the Air of a Room, Some Curious..... 365
Thirty Million Gallon Pump, Test of, at Chestnut Hill, Boston..... 992
*Tolman, William Nichols, Outlet Pipe from a Gasholder, Repair of a Broken 36-Inch..... 764
Train Lighting, Acetylene for, by A. Lipschultz..... 444
Trade Statistics, Remarkable..... 242
Traveling Cranes, Electric, by A. D. Williams..... 610
Trusts and their Relation to the Engineer, by Charles H. Wright..... 406

U

*Underground Metallic Structures, Electrolysis of, by Dabney H. Maury..... 165
Unprofitable Consumer, the, by Norton H. Humphrys..... 643

V

Violle on Contemporary Photometry..... 805
Vision, Experiments Illustrating Phenomena of..... 811

W

*Waddell, Forbes, Retorting and Condensing Temperatures 405
Wakeman, W. H., Electric Light Plant, Evolution of One 891
*Water Gas, Removal of Tar from, by W. C. Morris..... 765
Water in Steam Pipes, How to Use..... 411
*Weber, W. H. Y., Gas, the New..... 42
Weight of Radium, Atomic..... 892
West, F. D., Foundry, Training Students in..... 50
Wetmore, Jean, Fire Protection for Life and Property..... 950
*White, A. H., Burette for Accurate Gas Analysis..... 7
Williams, A. D., Electric Traveling Cranes..... 610
Wired Glass as a Fire Resister..... 282
Wiring, Interior, by G. C. Allingham..... 809
Wool, Mineral, Elbers' Method for Using..... 211
Wright, Charles H., Trusts and their Relation to the Engineer..... 406
Wright, J., Dielectrics at High Voltages, Notes on the Testing of Modern..... 600
Wright, J., Insulating Materials, Ethics of..... 849

Y

Young, Wm., Naphthaline from Retort to Point of Deposition..... 89

SPECIAL INDEX OF REPORTS OF PROCEEDINGS OF ASSOCIATIONS.

American Gas Light Association—Twenty-eighth Annual Meeting.

Address, Inaugural..... 682
Beal Medal, Appointment of Committee to Award..... 763
Communications, Some..... 724
Council, Report of..... 722
Council, Supplementary Report of..... 722
Gas Educational Fund, Trustees, Report of..... 723
In Memoriam—George Treadway Thompson..... 734
Membership, Applications for..... 722
Members, New, Election of..... 722
Next Meeting, Committee on Place of..... 734
Next Meeting, Report of Committee on Place of..... 765
Nominating Committee, Report of..... 733
Officers, Election of..... 734
President-elect Pratt's Response..... 794
President's Address, Committee on..... 724
President's Address, Report of Committee on..... 804
Research Committee, Appendices to the Report of the....724, 769
Research Committee, on Report of the..... 723
Research Committee, Supplementary Report from the..... 768
Resolutions, Committee on Final..... 724
Resolutions, Report of Committee on Final..... 805
Roll Call..... 736
Sanderson, Telegram to Mr..... 768
Secretary and Treasurer, Report of..... 723
Welsbach, Dr. Carl Auer von, Election of, to Honorary Membership..... 724

PAPERS READ:

Edgerton Standard, The, by Alten S. Miller..... 762
Gas Advertising, by F. W. Frueauff..... 767
Harcourt 10-Candle Power Pentane Lamp, by B. Norris 724
Incandescent Gas Light, Theory of the, by Dr. E. G. Love..... 728
Inclined Retorts, by A. H. Barret..... 72
*Outlet Pipe from a Gasholder, Repair of a Broken 36-Inch, by William Nichols Tolman..... 764
*Pyrometer, a Blue Glass, by E. H. Earnshaw..... 803
*Records and Accounts, the Use of Cards for, by William C. Anderson..... 705
*Water Gas, Removal of Tar from, by W. C. Morris... 765

Pacific Coast Gas Association—Eighth Annual Meeting.

Address, Inaugural..... 169
American Gas Light Association, Naming a Representative to the Next Meeting of the..... 365
Gas Congress, Naming a Representative at the..... 207
Invitation, an..... 225
Members, New, Election of..... 169
Obituaries, Report of Committee on..... 394
Officers, Appointment of Committee on Nomination of..... 206
Officers, Election of..... 395
President Ramsdell, Communication from..... 395
President's Address, Appointment of Committee on..... 165
President's Address, Report of Committee on..... 206
Question Box..... 363
Responses, Some..... 395
Roll Call..... 169
Seal, Altering the..... 225
Telegram, a..... 250
Thanks, Votes of..... 364

PAPERS READ—

Benches, Use of Crude Petroleum for Firing, by Dr. R. M. Powers..... 307
Boiler Explosions, Thoughts Suggested by, by T. B. Parker..... 249
Commercial Gases, the Synthesis of, by L. P. Lowe..... 322
Experiences, by O. M. Gregory..... 223
*Gas Engines, Some Notes on Larger Types of, by J. B. Crockett..... 206
Gas Processes, Investigation of, by A. C. Humphreys.. 346
Gas Stoves, the Best Method of Introducing, by John A. Britton..... 285
Petroleum, California, Some Chemical and Physical Characteristics of, by A. S. Cooper..... 289

*WRINKLE DEPARTMENT—

Air Trap to Assist in Correct Registration of Oil Meters 336
Boiler Connections, Cast Iron Fittings for, Adapted for Gas Stoves Particularly..... 336
Hot Coke, Hopper for Charging..... 335
Poker, A Cleaning..... 336
Purifier, Device for Cleaning..... 336
Tar and Oil Burner..... 336
Tar Burner..... 336
Tar Extractor for Tubular Condensers..... 336
Tar Separator..... 336
Water Gas, Device for Regulating the Amount of Oil Used for Enriching..... 336
Water Gas Plant, Graphic Charts Respecting the Operation of a..... 336